

OIB - DC-8 11/14/14 Science Report

Aircraft:

[DC-8](#) ([See full schedule](#))

Date:

Friday, November 14, 2014

Mission:

OIB

Mission Location:

Antarctica

Mission Summary:

F18 Foundation-Support Force 02

Accomplishments

- Low-altitude survey (1,500 ft AGL) over the Foundation Ice Stream and Support Force Glacier.
- ATM, albedo, KT-19, snow, Ku-band, MCoRDS, gravimeter, and DMS were operated on the survey lines.
- Collected additional high altitude data on transits to and from the survey area.
- Ramp pass at Punta Arenas airport before landing at 1,300 ft AGL.
- Satellite tracks: none.
- Repeat Mission: new mission plan.

Instrument	Operated	Data Volume	Instrument Issues/Comments
ATM	yes	32 GB	None.
CAMBOT	yes	48 GB	None.
DMS	yes	62 GB	None.
Snow Radar	yes	302 GB	None.
Ku-band Radar	yes	302 GB	None.
MCoRDS	yes	1.2 TB	None.
KT-19	yes	10 MB	None.
Albedo	yes	2.3 GB	None.
Albedo camera	yes	300 MB	None.
Gravimeter	yes	2.0 GB	None.

Mission Report (Michael Studinger, Mission Scientist)

Today's flight is a new mission plan, one of a suite of five flights designed to sample the bedrock, sub-ice shelf bathymetry and surface topography of the Foundation Ice Stream and Support Force glacier on a 20 km grid. This particular flight targets the area at and just below the grounding lines of these ice streams.

We had a high-priority mission plan over Thwaites Glacier, but because of low clouds visible in the satellite imagery and forecast model decided this was too much of a risk and instead selected the medium priority mission with excellent conditions. The one remaining baseline mission plan on the northern Antarctic Peninsula was not possible today. Conditions in the survey area were excellent and we were able to collect additional high-altitude data on the way to and from the survey area.

LiDAR data collection started 11/14/2014 15:29 UTC and ended at 20:04 UTC. In total we collected 4.6 hours of LiDAR data.

Images:

Figure 1: Today's trajectory in yellow.



[Read more](#)

Submitted by:

Michael Studinger on 11/14/14

Related Flight Report:

DC-8 11/14/14

Flight Number:

150125

Payload Configuration:

Operation IceBridge 2014

Nav Data Collected:

Yes

Total Flight Time:

11.5 hours

Submitted by:

Chris Jennison on 11/17/14

Flight Segments:

From:	SCCI	To:	SCCI
Start:	11/14/14 11:51 Z	Finish:	11/14/14 23:19 Z
Flight Time:	11.5 hours		
Log Number:	158003	PI:	Michael Studinger
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	Three transects over the Foundation and Support Force ice stream grounding lines. Airfield pass over SCCI at 2000 ft. for ATM. All instruments recorded data. ATM LIDAR recorded 32 Gb of data, Cambot 48 Mb, ZenithCam 300 Mb, Albedo 2.3 Mb MCoRDS 1.2 Tb recorded DMS recorded 62.1 Gb Gravimeter 2 Gb Snow & Ku radar 302 Gb/ea. Flight had no untoward events.		

Flight Hour Summary:

	158003
Flight Hours Approved in SOFRS	300
Total Used	292.1
Total Remaining	7.9

158003 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
10/06/14	150101	Science	1.2	1.2	298.8
10/07/14 - 10/08/14	150102	Science	5.2	6.4	293.6
10/08/14	150103	Science	3.7	10.1	289.9
10/13/14	150104	Transit	10.4	20.5	279.5
10/13/14	150105	Transit	3.2	23.7	276.3
10/16/14	150106	Science	11	34.7	265.3
10/18/14 - 10/19/14	150107	Science	11.9	46.6	253.4
10/20/14	150108	Science	11.7	58.3	241.7
10/23/14	150109	Science	11.8	70.1	229.9
10/25/14	150110	Science	11.4	81.5	218.5

10/26/14 - 10/27/14	150111	Science	11.9	93.4	206.6
10/28/14	150112	Science	11.5	104.9	195.1
10/29/14	150113	Science	10.9	115.8	184.2
10/31/14	150114	Maintenance	2.8	118.6	181.4
11/01/14	150115	Maintenance	3	121.6	178.4
11/02/14	150116	Science	10.9	132.5	167.5
11/03/14	150117	Science	11.1	143.6	156.4
11/05/14	150118	Science	11.4	155	145
11/06/14	150119	Science	11.1	166.1	133.9
11/07/14	150120	Science	10.9	177	123
11/08/14	150121	Science	11.4	188.4	111.6
11/10/14	150122	Science	11.2	199.6	100.4
11/11/14	150123	Science	11.2	210.8	89.2
11/13/14	150124	Science	11.4	222.2	77.8
11/14/14	150125	Science	11.5	233.7	66.3
11/15/14	150126	Science	11.2	244.9	55.1
11/16/14	150127	Science	11.1	256	44
11/21/14	150128	Science	11.2	267.2	32.8
11/22/14	150129	Science	10.8	278	22
11/24/14	150130	Transit	2.9	280.9	19.1
11/25/14 - 11/26/14	150131	Transit	11.2	292.1	7.9

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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